WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: SD1381

Title: Lipid Geochemistry of Waters and Sediments in a Prairie Pothole Hydrologic System

Focus Categories: Groundwater, Hydrogeochemistry

Keywords: organic geochemistry, lipids, dissolved organic carbon, Big Sioux aquifer, Groundwater

Start Date: 05/01/2001

End Date: 04/30/2002

Federal Funds: $15,000

Non-Federal Matching Funds: $30,238

Congressional District: First

Principal Investigator:
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Abstract

A study is proposed to describe the organic geochemistry of the lipid components of the dissolved organic carbon (DOC) of the Big Sioux Aquifer in eastern South Dakota. Previous studies have shown that selective sorption of DOC components to mineral surfaces as surface water percolates down into groundwater significantly alters the chemical characteristics of the DOC. The proposed study would identify qualitatively and quantitatively, the lipids components of the surface and ground water DOC using gas chromatography mass spectrometry. Experiments would be performed to assess the sorption behavior of lipids identified